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ABSTRACT

This report identifies a number of financing issues facing American higher education in the early 1990s, including: (1) the future federal role in postsecondary education in light of lagging participation rates of low-income and minority students and public concerns about many aspects of campus-based research; (2) the extent of state financial support of higher education when there is growing competition with other state responsibilities such as prisons, health care, and elementary and secondary education; (3) the changing role of colleges and universities in the face of limited resources; and (4) the responsibilities of students and their families should tuitions and other charges continue to rise faster than the ability of many families to pay for college. The report suggests that the states should bear the primary responsibility for financing higher education and should deal with equity issues internally. Institutions need to improve their efficiency in administrative operations, raising faculty productivity, and employing available technology to achieve cost savings, while the federal role includes assisting disadvantaged students, ensuring the existence of loan programs, and assisting nontraditional students in meeting their particular needs. A summary presents key issues and recommendations surrounding the federal, state, institutional, and parent and student roles. Contains 40 references. (GLR)

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Higher Education Finance Issues in the Early 1990s

Arthur M. Hauptman

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February 1993

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Abstract

This paper identifies a number of the financing issues facing American higher education in the early 1990s, including:

- the future federal role in postsecondary education in light of lagging participation rates of low-income and minority students and public concerns about many aspects of campus-based research;

- the extent of state financial support of higher education when there is growing competition with other state responsibilities such as prisons, health care, and elementary and secondary education;

- the changing role of colleges and universities in the face of limited resources; and

- the responsibilities of students and their families if tuitions and other charges continue to rise faster than the ability of many families to pay for college.

There are many problems with the financial condition of American higher education. Federal student aid programs seem ineffective at increasing participation rates of target groups of lower-income and minority students. Federal support of campus-based research, long an issue of bipartisan support, is facing mounting controversy.

Further, the traditional system of state funding of higher education seems to have broken down, at least to the extent that higher tuitions are replacing state taxpayer support. Institutions are searching for answers about how they can become more productive in an era of limited resources. And students and parents are left to wonder how they will pay for the higher tuitions and other charges.

For all these problems, however, there are also positive aspects of the nation's postsecondary system. Participation in American higher education is greater than ever. The American system continues to enjoy the reputation of being the best in the world. Research on campuses continues to produce exciting discoveries. States remain committed to providing large sums of money for public higher education.

The mixed picture of American higher education underscores the uncertain economic and social environment of the early 1990s. Any efforts to reform the financing of higher education must be cautious and well thought out. The following suggesfions provide some direction for changes in federal, state, institutional, and family roles in financing higher education.

The basic elements of the federal role in financing postsecondary education should include: providing a minimum level of assistance to disadvantaged students; ensuring the existence of loan programs to help students and parents meet higher tuition costs at both public and private institutions; providing assistance to nontraditional students that meets their particular needs; assuring a minimum level of quality at institutions eligible to enroll federally aided students; and strengthening the link between student aid and community and national service opportunities.

States should continue to bear the primary responsibility for financing higher education and should deal with equity issues internally. In order to do this, states should consider tying public sector tuition increases to increases in student aid; linking public tuition increases to growth in the state's economy; stabilizing funding for higher education through reserves and countercyclical debt; and re-examining the traditional reliance on enrollment-driven funding formulas

Institutions, both public and private, should use the budgetary stringency of the early 1990s as a motivation for getting more out of the resources they already have through improving efficiency in administrative operations; raising faculty productivity in terms of research, teaching, or service; and employing available technology to achieve cost savings without sacrificing quality.

Ultimately, the question of financing higher education comes down to whether students and their parents can pay for it. In the early 1990s, after a decade of rapid tuition inflation, and some faltering in the student aid system, that question is not an easy one to answer. But it is one that is well worth asking because all other financing issues will flow from it.

Biography

Arthur Hauptman is a private consultant in postsecondary education policy. He is the author of *The Tuition Dilemma* (Washington, DC: The Brookings Institute, 1990) and *The Economic Prospects for American Higher Education* (Washington, DC: Association of Governing Boards of Universities and Colleges, 1992).

Introduction

The early 1990s present significant financial challenges to American higher education. The prolonged if shallow national economic recession that began in 1990 led to relatively large restrictions in funding for many state activities including higher education. These funding shortfalls in turn led to rapid tuition increases at many public sector institutions. For students attending private colleges, the recession placed greater pressure on them and their families to pay the higher tuitions charged at these institutions. The recession also exacerbated an already large federal deficit, threatening future federal support for higher education as well as hundreds of other areas of federal responsibility.

In addition, accumulated criticisms about how higher education does its business have had the effect of reducing the traditional faith of policymakers and the American people in their system of colleges and universities. While these institutions are still generally acknowledged to be the best in the world, the many criticisms have taken their toll and have no doubt contributed to the erosion in financial support evident in the early 1990s.

As a result of these and other trends, colleges and universities in both the public and private sectors face increasingly difficult budget decisions in the 1990s and beyond. The expansion in resources that marked the mid- to late-1980s for many institutions has been replaced in the 1990s with the prospect of restricted revenue growth for the foreseeable future. Moreover, the demographic reality of the continued decline in the college age population through the middle of the decade presents at least two formidable financial challenges to colleges. First, can all these institutions survive until the demographics turn around? Second, will there be sufficient resources to finance the anticipated growth in enrollments towards the end of the decade and into the 21st Century?

This paper identifies a number of the financing issues facing American higher education in the early 1990s, including:

- the future federal role in postsecondary education in light of continued lagging participation rates of low-income and minority students and highly publicized concerns about many aspects of campus-based research;
- the extent of state financial obligations to higher education when there is growing competition with other activities such as prisons, health care, and elementary and secondary education;
- the changing role of colleges and universities in the future when resources are likely to be much more restricted than they have been in the past; and
- the responsibilities of students and their families if tuitions and other charges continue to rise faster than the ability of many families to pay for college.

The paper concludes with a summary of the key issues and recommendations for how these issues might be addressed.

The Federal Role

There has been a fair degree of confusion about the changing level of federal support during the 1980s. The media has made much of the fact that federal support for postsecondary education declined in the 1980s when adjusted for inflation, based in large measure on a series of Reagan administration budgets that proposed major cutbacks in many of the federal student aid programs. But the declines in federal student aid were primarily a function of the phasing out of the Social Security educational benefit for college students and the decrease in veterans educational benefits that occurred as Vietnam-era veterans used up their GI Bill benefits. After the initial Reagan budget battle successes in 1981, the Congress largely rejected further student aid cutbacks proposed by both the Reagan and Bush administrations, and federal support for the Department of Education financial aid programs grew in real terms for most of the rest of the decade.

In addition, bipartisan support for federal campus-based research funding led to substantial real increases throughout the 1980s. Nor was this growth limited to defense-related research associated with the defense buildup during the first half of the 1980s. Most of the sources of federal support for campus-based research, including the National Institutes of Health (the largest source of federal campus-based research support), the Department of Defense, the National Science Foundation, and NASA, increased after adjusting for inflation. As Table 1 indicates, federal support for higher education increased in real terms in the 1980s, with the larger increase for campus-based research.

Two issues dominated discussions of the federal role in postsecondary education in the early 1990s. One was debate over the reauthorization of the Higher Education Act which culminated in enactment of the legislation in 1992. Many questions remain, however, about whether the federal student aid and other programs as created or amended in the reauthorization are capable of meeting the basic objectives of providing access, choice and retention to a postsecondary education within foreseeable federal budgetary constraints.

The other principal issue of federal financing for postsecondary education is the changing nature and extent of the federal government's commitment to support research activities on campus or at university-affiliated research institutions. A number of issues related to the federal support of campus-based research have been prominent during the 1980s and into the early 1990s, including: ethical issues relating to the conduct of research, particularly animal and fetal tissue research; a series of widely reported incidents of fraud in the reporting of research findings; the growing inadequacy of academic research facilities; the rapid growth in the earmarking of facilities dollars to specific campuses outside of the typical peer review process; and the firestorm over the question of indirect cost recovery. Each of these issues, in one fashion or another, has undermined the traditional strength of federal support of campus-based research and has

raised the more general question of whether many universities have become too dependent on federal research dollars.

Table 1 - Federal Support for Higher Education

Year	ED Student Aid	Veteran's Aid/ Social Benefits	Research	Total
		Billions of current dollars		
1980	5.1	3.4	5.8	16.7
1981	6.2	3.8	6.3	18.4
1982	5.8	3.0	6.6	17.5
1983	6.6	2.0	7.2	18.0
1984	7.0	1.3	7.9	18.1
1985	7.7	1.0	8.8	19.7
1986	7.9	0.8	9.0	20.0
1987	7.3	0.8	10.5	20.6
1988	8.0	0.8	11.3	21.7
1989	9.8	0.7	12.0	25.0
1990	10.3	0.6	12.1	25.5
		Billions of constant dollars		
1980	8.3	5.5	9.5	27.4
1981	9.0	5.5	9.2	26.9
1982	7.8	4.1	8.9	23.6
1983	8.5	2.6	9.4	23.3
1984	8.7	1.6	9.9	22.6
1985	9.2	1.2	10.6	23.7
1986	9.2	0.9	10.5	23.4
1987	8.4	0.9	12.0	23.5
1988	8.8	0.8	12.3	23.8
1989	10.2	0.8	12.6	26.2
1990	10.3	0.6	12.1	25.5
Annual percent change, current dollars				
1980-1985	8.6%	-22.0%	8.8%	3.4%
1985-1990	6.0%	-9.1%	6.5%	5.3%
1980-1990	7.3%	-15.8%	7.7%	4.3%
Annual percent change, constant dollars				
1980-1985	2.1%	-26.7%	2.3%	-2.9%
1985-1990	2.2%	-12.4%	2.7%	1.5%
1980-1990	2.1%	-19.9%	2.5%	-0.7%

Reauthorization of the Higher Education Act

Of the issues debated during the 1992 reauthorization of the Higher Education Act, perhaps the most prominent one was whether Pell Grants should be made into a federal entitlement program. The principal purpose of the Pell Grant program is to serve as a foundation of financial support so that low-income students know with assurance that a certain basic level of assistance will be available to them if they choose to attend college. However, low-income and minority students continue to participate in college at much lower rates than wealthier, white students (Manski, 1992).

Many attribute this continuing disparity in college participation rates to the fact that the Pell Grant maximum award has not kept pace with inflation over time. One reason the Pell Grant maximum has not kept pace with inflation is that the program is part of the discretionary portion of the federal budget, in which annual appropriations levels determine how much will be available to recipients, thus subjecting the programs to annual uncertainty over funding levels. To combat this uncertainty and to ensure adequate future funding levels, leading Democratic representatives and senators sought to make Pell Grants into a federal entitlement program.

The Bush administration opposed such a change, arguing that there are already too many federal entitlements, one reason the federal budget has become so hard to control. Republican members of Congress supported the Administration on this issue, as did the Budget Committee leaders from both parties in both houses. As a result of this opposition, the Pell Grant entitlement provisions were withdrawn from both the House and Senate bills before final passage.

But the Pell Grant maximum has also not kept up with inflation because more middle-income and trade-school students have been added to Pell Grant eligibility over time, thereby diluting the effectiveness of the program for low-income students going to college. Roughly one-third of all Pell Grant dollars now go to students in trade schools. Making the program an entitlement would have made these current distributional effects more permanent.

Support for Pell Grants as an entitlement was premised on the notion that this would help to correct the loan/grant imbalance in the federal student aid programs. In the early 1970s, loans constituted a relatively small share of all federal aid, but the mix of loans and grants changed decidedly over the next two decades, in part because the Guaranteed Student Loan program is a federal entitlement and grants are not. Loans have become the largest form of federal aid, constituting roughly half of the $30 billion in aid from all sources in the early 1990s (College Board, *Trends in Student Aid*).

With the rejection of the Pell Grant entitlement provision, the 1992 reauthorization does little to prevent a further deterioration in the balance between loans and grants. Loan limits in each of the federal loan programs were increased in the reauthorization in an effort to keep up with the increased tuitions and other costs of attendance, while the

growth in funding for grant programs in real terms is likely to be slow or negative since these remain as discretionary programs subject to the limits of annual appropriations.

The reauthorization did take a modest step to redress the effects of the loan/grant imbalance by providing greater flexibility in repayment options for borrowers who are in danger of defaulting or who have already defaulted. These flexible repayment options include graduated and extended repayment terms as well as an option for borrowers to repay through the Internal Revenue Service on an income-contingent basis. Such provisions hold the promise of mitigating the adverse effects of increased borrowing. But these repayment option provisions are limited in the legislation to only a small proportion of borrowers who could benefit. Most of the close to a million individuals who annually default on their student loans, and the even larger number of individuals who defaulted in previous years, will still be without assistance in trying to make their repayment obligations more manageable. In addition, many borrowers who do not default but who nonetheless are having difficulty in making their payments would benefit from being eligible for flexible repayment options.

The debate over making Pell Grants an entitlement program occurred at the same time that Democrats and Republicans in both the House and the Senate wanted to extend assistance to more students from middle-class families. This congressional desire to extend federal financial aid to more middle-class students is a longstanding one, rooted in the belief that the political viability of the student aid programs is tied to convincing the politically active middle-class that these programs are not just for the poor. This political assessment is reaffirmed when members of Congress return to their states and districts and are barraged by constituents asking what is being done for them.

To accomplish this purpose, the new legislation increases the amount of income that is set aside for basic living costs, thereby reducing the family contribution expected of many middle-income students. The legislation also ignores the equity value of the parent's home in the determination of a student's financial need. Many members of Congress were proud of these two changes which will enable many currently ineligible middle-income students to receive federal grants and subsidized loans.

What very few members were willing to say, however, is that without additional funding for the federal student aid programs, the effect of expanding eligibility for aid for the middle-class will be a dilution of the benefits for more disadvantaged students who truly need the assistance. In the past, this financial reality is what prevented extension of aid eligibility further up the income scale. Apparently, in 1992, Congress decided that it was more important to appease the middle-class than to help the neediest students.

It is both ironic and unfortunate that at the same time that the Congress was debating the concept of a Pell Grant entitlement and expanding program eligibility for middle-income students, persistent underestimation of program costs led to a shortfall in spending in excess of $1 billion spread over two years. This shortfall in funding results in large part from the prohibition against federal borrowing to make up for mis-estimates of

spending in a program which historically has operated as a quasi-entitlement in that eligible students have never been denied aid. In the past, when funding has been insufficient to meet the awards of all students who applied for aid, then the size of awards were reduced rather than denying any eligible students from receiving aid. The existence of a funding shortfall, in combination with the expansion in program eligibility, will no doubt add to the difficulty of increasing the maximum Pell Grant award in the future.

Another principal focus of the 1992 reauthorization debate was the question of whether loans should be made directly by the federal government and educational institutions rather than the traditional reliance on banks and other private lenders in the Guaranteed Student Loan (GSL) programs. Proponents of direct lending argued that the federal government could save upwards of $1 billion a year in federal expenditures without reducing access to loans by using the federal borrowing authority and its lower rates rather than paying private sector middlemen market rates of interest. Analyses by the Congressional Budget Office and the General Accounting Office supported this view that substantial savings were likely under direct loans.

Credit reform changes in federal budget accounting rules adopted in 1990 altered the parameters of this debate in that henceforth the federal costs of loans will be calculated on the basis of the present value of federal subsidies provided over the life of the loan. Thus, with credit reform, direct loan programs in which the federal government provides the initial capital and is repaid over time will be able to compete on a more equal basis with guaranteed loan programs in which the private sector is the source of capital and is paid over time for the use of its money. A number of legislators in both the House and the Senate expressed support for introducing the direct lending concept into student loans, and a sizable direct lending program was incorporated into the House bill.

Opponents of direct lending, including representatives of the various banking associations, the Student Loan Marketing Association (Sallie Mae), and the state guaranty agencies, argued that the current loan system works well, having provided billions of dollars of loans to deserving students over the years, and that the difficulties and startup costs entailed in establishing a direct lending system would actually reduce access to loans relative to the current programs.

Perhaps to the surprise of some, the Bush administration, despite its role in other areas as a proponent of spending and deficit reduction in the face of congressional inclination to spend more money, was a leading opponent of the direct lending concept. The administration arguments against direct lending, principally formulated by the Office of Management and Budget, included opposing having the government borrow money even if it were cheaper to do so than to pay private lenders for the use of their funds, as well as a concern that the Department of Education would be unable to administer such a program. The administration also apparently was heavily influenced by the banking community and others who have a vested interest in seeing the GSL programs continue more or less in their current form.

The conference committee of the House and Senate initially agreed to a fairly substantial direct lending demonstration program that would have allowed up to 500 colleges to participate with annual lending volume probably in the $1 to $2 billion range. But the Bush administration threatened to veto the legislation because of the inclusion of direct loan component. Congressional leaders were unwilling to test this veto threat, and the final reauthorization legislation includes a much scaled-back direct lending demonstration project that will be limited to $500 million in annual loan volume and will be restricted to a smaller number of institutions.

Another focus of attention during the reauthorization process was the question of program integrity and who should be responsible for ensuring that the institutions eligible for federal student aid provide a quality program. Much of the emphasis on the need for greater program integrity is a function of the continuing high default rates in the student loan programs.

The federal student aid programs have traditionally relied on the so-called triad of institutional accreditation, state review, and federal eligibility requirements to help ensure adequate quality control in institutional program offerings. The history of this triad approach can be traced back to the 1960s when most of the current federal student aid programs were created. At that time, the question was raised about how students could be assured that the programs in which they enrolled were legitimate. Many of the national and regional accreditation processes had already been in existence for several decades at that time and seemed capable of providing reasonable reviews of the quality of educational programs.

Lacking a better alternative, the authors of the 1965 Higher Education Act required that institutions must be accredited in order for their students to be eligible for federal aid. Over time, state higher education agencies also became more involved in the oversight of institutions participating in federal aid programs. The federal leg of the triad stool consists of the U.S. Department of Education certifying accrediting agencies to judge institutional eligibility for federal aid as well as a requirement that the Department must directly approve institutions to participate in the federal aid programs.

Over time, however, this triad arrangement has become increasingly ineffective in ensuring program integrity for federal student aid. The federal approval of institutions role has largely been pro forma. That was also the case for the federal certification of accrediting agencies, although Secretary Lamar Alexander ended that tradition when he challenged the right of the Middle States accreditation agency to use diversity as a criteria for accreditation. (After more than a year of negotiations, Secretary Alexander did recertify Middle States, although the decision is subject to further review.) In many states, the state role has been weakened because a number of state agencies are responsible for reviewing different groups of institutions, with the result that the overall impact of state review is often uncoordinated and diluted. In addition, many states view proprietary schools as small businesses and therefore minimize their regulation of them.

The weakest link of the triad, however, remains the accrediting agencies themselves. These agencies rightly remain focused on their principal purpose of reviewing the academic merits of institutions, a function which often bears little relevance to whether institutions are financially viable enough to qualify for federal aid to their students. In addition, the fact that the institutions themselves provide the bulk of the revenues of the accrediting agencies creates a less than arms-length environment and surely compromises the ability of some agencies to make negative judgments against their members.

In discussions leading up to the 1992 reauthorization, Congress sought to improve this system by giving more authority to the state agencies. A wide range of postsecondary institutions and accrediting agencies opposed this move for a variety of reasons. The elite colleges and universities bristled at the notion that a state agency would be in the position of advising them about the quality of their academic programs. The less elite schools worried that state agencies would be more difficult to deal with than the accrediting agencies in which they were dues paying members. The accrediting agencies worried that they would lose the responsibility of reviewing institutional eligibility for federal student aid, which over time had become one of their major roles. Key legislators responded to these concerns, and the eventual legislation was substantially less restrictive and intrusive than at least some of the initial proposals.

When discussions about the 1992 reauthorization legislation first began several years before it was passed, there was a sense that this legislation might be the first revision of the Higher Education Act since 1972 that would entail major changes in the federal student aid programs. The *Washington Post* at one point considered this "the major piece of domestic legislation in the 102nd Congress."

But congressional unwillingness to grapple with many of the tough issues associated with possible major changes and a distinct lack of leadership on the part of the Bush administration resulted in legislation that can more appropriately be described as one of marginal change. And because a number of the major thorny questions were not answered by the legislation, many important issues in federal student aid remain unresolved. Some of these issues may be reopened.

For example, the inability to make Pell Grants into an entitlement, and the congressional insistence on expanding eligibility for aid to middle-class students, means that lower-income students will still have insufficient grant aid to go to college. Therefore, there is reason to worry that the "loan/grant imbalance," which so many in Congress deplore, will most likely grow rather than decrease with the passage of the 1992 reauthorization legislation.

One unfortunate consequence of the substantial attention paid to direct lending during the reauthorization process is that relatively little attention was paid to needed reforms in the Guaranteed Student Loan program. As a result of this inattention, many of the basic shortcomings of the program are still very much in place, including its excessive complexity and a relatively high federal subsidy per dollar loaned (at current interest rate

levels, the long term federal cost of student loans is roughly 25 cents per every dollar loaned). The changes that were made in the reauthorization—a small decrease in the federally paid rate of return for lenders, a slight increase in the interest rate charged to borrowers, and the creation of an unsubsidized program within the Stafford loan program—will not substantially reduce the underlying federal cost or the complexity of student loans.

While there was much discussion during the reauthorization debate of the concept of income-contingent loan repayment, the final legislation contains little in this regard. The debt management options mentioned previously, and a component of the direct lending program that requires income-contingent repayment, are the only vestiges in the legislation of the debate over income contingency.

In addition, the 1992 reauthorization did very little to address the many calls for strengthening the linkage between student aid and the performance of national or community service. If anything, the legislation takes a backward step in this regard by consolidating and reducing the list of service activities which qualify for deferments in the student loan programs.

Nor did the 1992 reauthorization legislation do very much to address the very real needs of nontraditional students—those who are older, part-time, and not dependent on their parents for financial support. In fact, for those nontraditional students who are single and not financially dependent on their parents, the 1992 legislation severely reduced their eligibility for aid, both by raising the age at which independence is allowed from 22 to 24 years of age, and by substantially increasing the amount single independent students will be expected to contribute to their education.

The Federal Role in Research

In the half century beginning with the Second World War, universities have played an increasingly prominent role in the conduct of research in this country. Over half of all basic research in this country is conducted on campuses or at federally funded research and development centers (FFRDCs). In the early 1990s, the federal government was providing roughly $10 billion annually to support campus-based research. Over the past 50 years, the federal investment in campus-based research can be measured in the hundreds of billions of dollars.

While this investment has been repaid many times over in the form of thousands of pathbreaking discoveries and practical applications, in the late 1980s and early 1990s, more controversies surrounded campus-based research than in at least several decades. Ethical issues such as the protocols used in animal research have led to shrill campus protests. Several celebrated cases of fraud in research have cast doubts in the public's mind about the conduct of research and could threaten the level of financial support in the future.

One issue regarding federal support of campus-based research is the inadequacy of the infrastructure—the facilities and equipment. Despite the substantial and growing federal investment in campus-based research over time, the inadequacy of research facilities on campus has been the subject of a number of reports over the past decade. The basic problem appears to be that too small a proportion of the federal funds for research have been invested in facilities construction, maintenance, and renovation. In the 1950s and 1960s, separate appropriations were made for facilities, but in recent decades the bulk of funds for facilities has come through indirect cost recovery, a very inefficient way of financing a crucial component of the campus-based research process.

A related issue which has garnered much publicity in recent years is the growing practice of earmarking funds for the construction of research facilities on specific campuses. According to one estimate, more than $700 million was provided to colleges and universities in the form of earmarked appropriations in fiscal year 1992, and nearly $2.5 billion was provided since 1980 when annual academic earmarks were roughly $10 million (Savage, 1992). Traditionally, federal campus-based research funds have been distributed on the basis of a peer review system in which individuals who are familiar with a field of research are asked to review and grade proposals for funding in that field. These peer reviews, in combination with some consideration of cost effectiveness, largely determine which proposals receive funding. Proponents of the peer review approach argue that it ensures that the best research will be done. Opponents of peer review argue that it is a vintage old boys network that precludes many worthwhile projects from being funded because the researchers are not tied into the network.

While each of these concerns is real and substantial, the darkest cloud on the horizon of the federal role in research is undoubtedly the issue of indirect cost recovery. Stanford University was the catalyst for the emergence of this issue when it was revealed that expenses for a number of questionable items, including fancy provisions for the President's home and a donated yacht, had been submitted over the years as part of Stanford's indirect cost pool of expenses. Adverse publicity in the press and a set of congressional hearings led to investigations of the practices at a number of other research universities. Several institutions were required to return millions of dollars in questionable billings. Some institutions renegotiated their indirect cost recovery rates.

The issues underlying the system of indirect cost recovery, however, stretch far beyond the practices at Stanford and the other institutions that have been the subject of recent investigations. The existing system, which dates back over 30 years to the development of O.M.B. Circular A-21, is based on the principle that an institution's indirect cost recovery should be tied to the share of research-related costs in an institution's total budget.

But such a system gives institutions great incentive to categorize as many spending items as part of their pool of research-related costs as possible. While Stanford was certainly one of the most aggressive research universities in seeking indirect cost recovery, it and other institutions correctly point out that they were playing according to

the rules as they understood them. Complicating matters was the fact that the federal government was never very clear in setting out what those rules were. Straightening out this highly publicized issue, therefore, must involve reexamining the fundamental principles of the system itself (Rosenzweig, 1992; General Accounting Office, 1992).

All of these research-related issues take on greater significance because as the federal research investment has grown over time, so has the dependence of universities on federal research dollars. While federal grants and contracts constitute less than 10 percent of total revenues for all colleges and universities, at some major research universities federal dollars represent one-quarter or more of their total revenues, and indirect cost reimbursements sometimes exceed 10 percent of an institution's total revenues. This dependence on federal research funds could be problematic for many research universities under a number of plausible future scenarios. For example, the end of the Cold War and the resultant decline in defense spending will likely reduce the amount of federal research dollars for defense-related research. Those institutions which are particularly dependent on defense research dollars would likely bear the brunt of this shift. Efforts to reduce the federal deficit through a balanced budget amendment or legislative initiatives would likely mean a substantial reduction in federal support for campus-based research. Similarly, any radical change in the method of indirect cost recovery could have substantial financial impacts on a number of research universities.

In sum, the tightness in the federal budgetary outlook and questions about past practices mean that questions about the federal role in research will continue to be raised. For example, do universities continue to represent the best avenue for the federal investment in research, or would a more commercially-oriented approach make more sense? Is the current mix between defense and non-defense research the most appropriate one? To maximize effectiveness, should federal research dollars be concentrated on the best researchers at a small set of universities, or would better results occur if the funds were spread more widely? These questions and others are likely to be the focus of debate throughout the rest of the 1990s.

State Obligations for Higher Education

States remain the primary funding source for American higher education, paying roughly 30 percent of the total $150 billion in expenditures in 1990. More than 90 percent of these state funds are provided in the form of general support to public institutions which allows them to charge tuitions which are significantly lower than the cost per student of providing the education. The remaining state funds are for student aid, research, and in a handful of states, the financial support of private institutions. At public institutions nationwide, state funding constitutes over 40 percent of their total revenues.

Because of this dependence on state funding, the financial condition of public institutions is very much a function of the ability of the states to raise revenues and provide funding. In most states, funding for higher education tends to be on a roller coaster, with large increases when the economy is doing well and more limited increases or real declines when economy goes sour. Under the existing system in most states, when the economy sours, state funding becomes restricted, and public institutions typically turn to tuitions to make up the difference between their budgets and what the state will provide. As a result, public sector tuitions tend to rise the most when students and their families can least afford it, during tough economic times.

In addition to these traditional problems with the system of state finance, other troubling signs have emerged in recent years. A smaller proportion of the students who enroll in public institutions graduate, and those who do, take longer to do so. There also appears to be a disturbing shift in the income distributions of students at many public institutions, with more wealthier students enrolling in the flagship institutions while economically disadvantaged students are increasingly more likely to enroll in state colleges or community colleges.

In the 1980s, the share of total state funding devoted to public higher education declined. But public colleges and universities were able to postpone hard choices about how to spend their funds because the overall economic pie grew. With this economic growth, state funding of public higher education grew in real terms despite the fact that the share of the state pie for higher education declined. But the underlying problems with the way that states finance public higher education came home with a vengeance in the early 1990s.

The national recession that began in 1990 restricted state appropriations for higher education. After doubling from $20 billion in 1980 to $40 billion in 1990, state funding hovered around the $40 billion mark for the first two years of the 1990s. In fact, for the first time since records were kept in the late 1950s, the amount of state funding for higher education in 1991 actually declined in current dollars from the previous year (Hines, 1992). Tight financial conditions led at least half the states to resort to midyear cutbacks in funding for public colleges (American Association of State Colleges and Universities,

1992). The restrictions in state funding led in turn to large increases in public sector tuitions. In 1991-92, the national average of public college tuitions increased by about 14 percent, and while that increase moderated somewhat in the following year, increases of about 10 percent were still the case in 1992-93.

One of the more interesting and important questions that emerges from these trends is why the recession of the early 1990s apparently had much more adverse consequences for public higher education than a number of previous recessions which statistically were much more serious. During the recession in the early 1980s, for example, public sector tuitions increased by double digit percentages for several years, but the impact on institutional finances seemed much less severe than in the early 1990s. Nor did the very deep recession of 1975-76 seem to bring as much pain in the form of budget cutbacks to public colleges as has the recession of the early 1990s.

One of the more prominent explanations that has been offered for why this recession hurt public higher education so much is that there is much greater competition for state funds in the early 1990s than was previously the case. Elementary and secondary education, health care, and prisons are all functions which seem to be getting higher priority than postsecondary education in state budget battles. Also, the "caseloads" for these other activities are increasing, while the underlying college age population will continue to decline through the middle of the 1990s before it begins to increase. These demographic facts make it that much harder for public colleges to increase their funding when overall resources are tight.

The difficulties that public colleges and universities face in increasing their share of the state funding pie may also be a function of the increasing volume of criticism being directed at American higher education. A stream of critical books and articles from both the right and the left may have planted questions in the minds of the public and the policymakers. For whatever reason, the proportion of all state tax dollars devoted to higher education fell in the 1980s, and there is little to suggest that this trend will reverse itself, at least through the middle of the decade.

A key policy issue in the early 1990s is whether broad access to public higher education can be maintained in the face of rising tuitions and these various financial and demographic trends. The most obvious solution would be to increase the amount of student aid provided by states and public institutions to offset the effects of the higher tuitions. But because of their overall budget squeezes, most states did not increase their grant programs sufficiently to protect the neediest students from the adverse effects of the tuition increases. As a result, access to public higher education in the early 1990s most likely declined as the net price of public higher education increased.

Two radical and opposite approaches to tuition setting in the public sector have been proposed to address the issue of maintaining access. One is to set public college tuitions at zero, i.e., postsecondary education would be free to the consumer, with the federal, state, or local taxpayer picking up the full tab. This would be similar to the system of free

public education that has been a foundation of American K-12 education for over a century. This is also how higher education is essentially financed in most other industrialized countries. A modified version of this approach would be to make the first two years of public college free, while continuing to charge tuitions in the junior and senior years.

The other radical departure in pricing policy would be to set public college tuitions at the full cost of educating a student. Proposals for full cost pricing are based on the notion that the benefits accruing from higher education are largely private ones and should be borne by the consumer. Those who advocate full cost pricing typically also call for either a much expanded program of grant aid to help meet the need of students who cannot afford the much higher price, and/or a full blown program of income contingent loans in which students could borrow up to the full price and repay on the basis of their income once they graduate.

Both of these radical pricing approaches, however, are likely to fall short of the goal of enhancing access to higher education. A system in which higher education is free to the consumer, surprising as it may sound, seems to result in less access to a higher education if the experience in other countries is a guide. Most industrialized countries do fully subsidize their system of higher education, and in those countries, rates of participation in higher education are distinctly lower than in the United States. This occurs in part because the amount of resources that a country can devote to higher education is limited, and when the decision is made to subsidize one student fully, that typically means there is less available to fund other students. As a result, access to higher education becomes rationed and fewer students may be able to continue their education beyond the high school level.

The full cost pricing approach, on the other hand, would in effect ignore the existence of whatever societal benefits that public higher education provides. It also ultimately depends on a much expanded use of loans to finance the higher tuitions. If students are unable to repay these loans, then the result may be higher default rates and possibly less access in the long run. Less access could also be the result if potential students are unwilling to go into debt in order to attend.

Because of the potential shortcomings in each of these radical pricing approaches, most of the debate on public college tuitions has centered on a set of less extreme approaches. Low tuition (but not zero) is the approach supported by those who believe that tuitions at public colleges should be kept as low as possible, but recognize that there are limits on the size of state and local coffers and that there is a private benefit to the individual who attends college. This point of view is buttressed by the argument that low public college tuitions enabled the remarkable growth in public sector enrollments since the end of the Second World War

With the current and projected financial strains on state governments, however, an increasing number of observers advocate raising public tuitions in the direction of full cost

pricing as long as sufficient aid is provided for students who would have difficulty meeting the higher price. One proposed reform in this direction which has generated much discussion is to raise public sector tuitions to meet at least the full cost of providing a two year public college education and to expand the federal Pell Grant program as the vehicle to meet much or all of the need of students who otherwise would be unable to meet the higher price (Fischer, 1990; McPherson and Schapiro, 1992).

Some opponents of this approach argue that the primary responsibility for financing higher education should remain with the states. They point to the fact that the federal government is facing enough budgetary difficulties and demands without adding higher education to the list of its primary responsibilities. Proposals to use Pell Grants to meet the increase in public sector tuitions would require at least $5 billion in new federal dollars and quite possibly closer to $10 billion.

A more modest step in the direction of full cost pricing would have the states deal internally with the equity issues involved in raising tuitions rather than shift that burden entirely or primarily to the federal government. States could maintain access to higher education in the face of rising tuitions by putting in place policies that ensure that grant aid increases are commensurate with increases in tuition. Regrettably, very few states attempted to maintain such a safety net in the early 1990s when public college tuitions increased substantially.

Further, the federal government could provide incentives for states to raise their tuitions and aid simultaneously. The most direct means of federal intervention would be to change the terms of the State Student Incentive Grant (SSIG) program to provide funds only to those states which raised their public tuitions and the budgets of their student grant programs. A more subtle and probably more effective approach would be to have the federal government meet a portion of tuition increases at public colleges through the Pell Grant program award formula, thereby making the federal government and the states partners in the decision to raise tuitions.

Such a tuition-sensitive approach for Pell Grants was jointly advocated by a number of the higher education associations as part of their proposals for the 1992 reauthorization of the Higher Education Act. Under the associations' proposal, the Pell Grant award formula would have become at least moderately sensitive to tuition, as a student's award would have covered 25 percent of tuition at the institution attended, up to a maximum tuition of $2,000 to $3,000 depending on the future funding of the program. Congress, however, rejected this approach in the final legislation, opting instead for a basic continuation of the existing formula, with a removal of the provision which limited awards to 60 percent of a student's cost of attendance. With this and several related decisions, the Pell Grant program in the future will predominantly provide benefits to students in community colleges and shorter term vocational programs of one year or less. The burden of providing choice in the future therefore will fall even more heavily on the Guaranteed Student Loan programs and on the federal campus-based student aid programs of Supplemental Educational Opportunity Grants (SEOG), College Work Study, and Perkins Loans.

The Issues Facing Institutions

The financial issues facing institutions in the early 1990s can be divided into two basic questions: One is how colleges and universities finance themselves. The other is how the money is spent. In terms of the first question of financing mechanisms, public and private institutions face a much different set of issues. But in terms of how the money is spent, the increasingly difficult set of issues facing public and private institutions in the early 1990s are quite similar.

In the 1980s, American higher education enjoyed a substantial increase in its revenues, as Table 2 indicates. Each of the major sources of revenues—state and local funding for public institutions doubled over the decade, a real increase of roughly 30 percent. Tuition and fees nearly tripled, a real increase of roughly two-thirds over the decade. Annual gifts and endowment income grew in real terms as well, principally for private colleges but also for the growing number of public institutions who sought private gifts as an alternative source of revenue. Federal funds and sales and services for both sectors increased in real terms when adjusted for inflation. Some have suggested that the seeming intent of colleges and universities to maximize their revenues in the 1980s contributed to an erosion of public trust and confidence in American higher education (Bok, 1992; Winston, 1992).

The principal financing question facing public institutions in the early 1990s is what to do about the set of cutbacks in state funding brought about mostly by the recession. A related and perhaps more important question is whether the difficulties of the early 1990s represent the beginning of a new longer term trend, or whether once the economy revives, state funds and other revenues for public colleges will begin to increase again at historical rates.

For private institutions, the most prominent financing issue in the early 1990s is the question of the limits of the high tuition/high aid strategy, which worked so well for many schools in the 1980s. But many private colleges by employing this strategy appear to have priced themselves outside the range of the middle- and upper middle-income students whose family income disqualifies them on the basis of need from getting very much if anything in the way of grant assistance but who do not have the resources to pay the full price. Even when these students and their families do have the ability to pay these higher tuitions, the available data indicate that some of them are deciding to attend lower priced institutions, particularly public flagship universities. The result has been an exodus of students from the private colleges, which some have dubbed the "middle-class melt" (McPherson and Schapiro, 1991). With this melt, a smaller percentage of students enrolled are not on aid, which means that these schools get to keep less and less of their marginal tuition dollars for non-student aid purposes. At some point, which many private colleges may be approaching, large tuition increases are not worth it because they threaten

to drive away more middle-class students and because they generate too few new resources, after the increase in financial aid is considered.

Table 2 - Revenue Sources in Higher Education, 1980-1990
(dollars in billions)

Current dollars

	1980	1985	1990
Tuition and Fees	11.9	21.3	33.9
Federal Government	8.9	11.5	17.3
State and Local	20.0	30.0	41.9
Endowment Income/Gifts	4.0	7.0	10.9
Sales, Services & Others	13.7	22.7	35.6
Total Revenues	58.5	92.5	139.6

Constant (1990) dollars

Tuition and Fees	19.5	25.6	33.9
Federal Government	14.6	13.8	17.3
State and Local	32.7	36.0	41.9
Endowment Income/Gifts	6.6	8.4	10.9
Sales, Services & Others	22.4	27.3	35.6
Total Revenues	95.8000	111.1000	139.6

Annual percent change
(current dollars)

	1980-85	1985-90	1980-90
Tuition and Fees	12.3%		11.0%
Federal Government	5.3%	8.5%	6.9%
State and Local	8.4%	6.9%	7.7%
Endowment Income/Gifts	11.8%		10.5%
Sales, Services & Others	10.6%		10.0%
Total Revenues	9.6%	8.6%	9.1%

Annual percent change
(constant dollars)

	1980-85	1985-90	1980-90
Tuition and Fees	5.6%	5.8%	5.7%
Federal Government	-1.1%	4.6%	1.7%
State and Local	1.9%	3.1%	2.5%
Endowment Income/Gifts	4.9%	5.3%	5.1%
Sales, Services & Others	4.0%	5.5%	4.7%
Total Revenues	3.0%	4.7%	3.8%

Private colleges, and to a lesser extent, public institutions, were severely criticized for the large tuition increases in the 1980s. Critics like William Bennett when he was Secretary of Education called the colleges greedy for charging their students so much. This image of greed was further fed by the Justice Department's investigation of the "overlap" practice in which groups of elite private colleges met each year to compare financial aid offers to applicants admitted to at least two of the participating institutions. This investigation, the subsequent consent decree in which the ivy league colleges agreed to discontinue the overlap process, and MIT's unsuccessful court challenge of the consent decree all have contributed to an increasing proportion of the public wondering whether all the increases in tuitions have been necessary.

But as much criticism as there has been about the growth in tuitions and other revenues, similar or greater levels of concern have been raised about how colleges spent the funds they received. These criticisms about how colleges spent their funds have had several targets. Some complain that colleges spent too much money on frivolous items that were not central to the educational mission of the institutions. The construction or renovation of a wide range of recreational, cultural, and housing facilities on many campuses contributed to this line of criticism. Faculty salaries overall increased in real terms in the 1980s. This increase in salaries was often attributed to a catchup from the 1970s when faculty salary increases lagged behind the rate of inflation. At many research institutions, the growth in a variety of revenues not only permitted an increase in faculty salaries but also a decrease in teaching loads. This reduction in teaching loads, and the continued and growing use of teaching assistants in lieu of faculty, have made the research universities frequent targets of recent criticisms (Sykes, 1990).

The growth in revenues also allowed for an increase in administrative staffs on many campuses. In the late 1970s and throughout the 1980s, administrative costs were one of the fastest growing components of higher education expenditures, and administrative staffs grew much faster than the number of faculty. College officials have responded that additional regulatory burdens resulting from the enactment of environmental, health care, disability, and other legislation were a major reason for the increase in administrative staff in higher education in the 1980s. The growth in administrative staff was also a function of greater professionalization, as many colleges hired investment advisors, physical plant managers, health care administrators, real estate managers, and others in an effort to manage resources more effectively and to raise more revenues.

Although official reactions to these and other criticisms of the growth in revenues and expenditures were often ones of dismissal, many involved with higher education recognize that many of these criticisms were at least partially accurate, if often polemical. In addition, some observers argue that the rapid growth in revenues in the 1980s for both public and private institutions led to a set of spending practices which needed to come under increasing scrutiny as the resource base leveled off or declined in the early 1990s. The thrust of these various analyses from within is that colleges and universities need to rethink how they do their business because the revenues on which they once relied for expansion may not be available in the future. Possible future resource constraints have

also breathed new life into the question of productivity in higher education, and the potential for improving it in the future. These examinations have taken several directions.

William Massy, Robert Zemsky and a number of their colleagues have been in the forefront of the question of productivity. Through their investigations of how institutions, particularly research universities, work, they have provided thoughtful insights into the operation of academic departments and institutional administrative practices. They have also reintroduced or coined a whole set of terms to describe what they have discovered, including "cost disease" and "growth force," "academic ratchet" and "administrative lattice," and the need for "growth by substitution" (a more catchy version of the economists' traditional advice to seek one's comparative advantage) (Massy & Wilger, 1991; Odden & Massy, 1992).

A number of analysts and observers, including Peter Ewell, Ted Marchese, and others have been pursuing questions of whether the use of assessment and outcomes measurement might make higher education better. While the issue of assessment in higher education still lags far behind the level of debate in K-12 education, it is only natural to suppose that the gaps will narrow over time. These assessment arguments have spilled over into state capitals as governors and legislators seek ways to make public colleges more accountable. This sentiment has also been heard on Capitol Hill as the Congress pushed through a bill to require institutions to report the graduation rates of their athletes. This approach will likely spread eventually to measurements of the graduation rates of all students.

Still another avenue for investigation of productivity improvement might be classified under the category of "Total Quality Management (TQM) Comes to Academia." Daniel Seymour and others have taken the general statistical techniques of Edward Deming and investigated whether they can improve how higher education operates. One of the outstanding questions is whether successes in some administrative areas, which seem more amenable to techniques such as TQM, can be translated into greater productivity on the much thornier issues of how faculty members spend their time and energy.

The potential resource constraints in the 1990s also raise the question of the solvency of at least some institutions. Predictions in earlier decades of large numbers of mergers and closing of institutions did not materialize. But the possibility remains that in the 1990s these concerns will finally prove justified. Thus, financial fragility may lead some institutions to look toward foreign investors or extremist groups to provide solvency, represents still another set of issues facing higher education in the 1990s.

Student and Family Responsibilities

More than most other industrialized nations, America relies on its students and their families to pay for the costs of higher education by imposing tuition and other fees. In most other countries, governments pay for all, or least most, of these costs.

Decisions by governments and institutions ultimately devolve to the question of whether students and their parents can afford to pay for a postsecondary education. The rapid rise in tuitions and other charges in the 1980s in both the public and private sectors has led to much hand wringing that college is no longer affordable to a broad range of American families. Despite the growth in tuition and other charges, however, participation in postsecondary education is at an all-time high according to a variety of indicators. The number of students enrolled in the fall now exceeds 14 million. And if enrollments are counted throughout the year, the number of students in some form of postsecondary education now is close to 20 million, or 8 percent of the American population (Eaton, 1992). In terms of participation rate, 60 percent of the students who graduate from high school in the spring can be expected to enroll in a college program in the following fall, another all time high.

The paradox of seeing participation increase along with price increases can be explained in a number of ways. Students are attending in record numbers, but not at the institution of their choice. Recession has bloated the recent enrollment figures, as individuals who might otherwise be employed decide to go to school instead when the job market is tight. While the median family income stagnated in real terms during the 1980s, the rich got richer, perhaps explaining why private colleges were able to raise their charges yet maintain enrollments. In addition, a wide variety of innovative financing mechanisms including prepaid tuition plans, college savings plans, and private loan programs were developed in the 1980s to help parents and students pay the higher price of a higher education.

Despite these increases in participation and the explanations for why they occurred, concerns about the continued ability of many families to pay for college persist. Surprisingly, despite the growth in government student aid, the overall role of the family in financing postsecondary education has not changed all that much since the 1960s; the percentage of the total bill paid by families has stayed fairly constant over the past several decades.

Although the family share may not have changed, there is certainly reason to be concerned that the role of parents in the mix of family financing of postsecondary education may have diminished over time. The substantial growth in the proportion of student aid recipients who are financially independent of their parents is one manifestation of this concern. The tremendous growth in borrowing by students is another indication that the mix between parents and students is not what it once was, nor what it should be.

This sense of the shift toward greater dependence on students to pay for college is confirmed by a recent analysis done for the National Commission on Responsibilities for Financing Postsecondary Education (Roose and Hauptman, 1992). The analysis indicated that the student share of the costs of attendance doubled between 1950 to 1990, from 17 percent of total costs of attendance in 1950 to 34 percent in 1990. In the 1980s, however, the percentage of costs met by students declined slightly, a function perhaps of the leveling in the use of loans toward the end of the decade and restrictions being placed on traditional college age students declaring financial independence from their parents.

To the extent that these trends are the consequence of demographic factors, policies may not need to be changed. For example, the growth in the proportion of students who are independent is a consequence of the fact that college students today are older than was the case several decades ago. If this is why the statistics on aid applicants have changed, then there is little reason to alter existing policies.

But the more relevant question is what to do about these trends when they are the result of the policies that have been in place. For example, the proportion of financially independent students also has increased because many students can receive more aid if they are able to qualify as independent than if they apply as dependent on their parents. Students may also be borrowing more because their parents are encouraging them to take advantage of the relatively abundant availability of subsidized loans.

A primary issue in the early 1990s is whether the rapid increase in tuitions and other charges throughout most of the 1980s has put a college education beyond the financial reach of many students and their families. The empirical answer appears to be "no" in that participation rates in higher education are at their highest level ever, but there are a number of reasons to believe that pricing strategies in both the public and private sectors have altered the kinds of institutions that different types of students attend.

To answer this question, changes over time in the ability of families to pay for college must be examined. It is also important to factor into the equation the aid that students receive, rather than rely on the posted sticker price as an indicator of what students and their families actually pay.

In this regard, public college charges of tuition, room, and board as a percentage of income were actually slightly lower in 1990 than they were a quarter century earlier in 1965. They declined from 14 percent in 1965 to 11 percent in 1980 and then increased back to 13 percent in 1990. In the 1980s, virtually all of the increase in this proportion came in the early part of the decade when public college tuitions increased by double digit percentage in three successive years. Private college charges as a percentage of median family income, on the other hand, fell from 29 percent in 1965 to 25 percent in 1980 and then increased to 35 percent in 1990. In the 1980s, therefore, private college charges as a share of income grew from one-quarter to one-third (U.S. Department of Education, *Condition of Education, 1991*).

How have private colleges been able to maintain their enrollment levels in the face of increases in tuitions and other charges relative to parents' ability to pay? Several plausible explanations, particularly applicable to the 1980s, are that:

- The amount of loans provided to students by institutions and through the GSL programs enabled students and their parents to pay these higher prices.

- The much greater use of creative college financing mechanisms, similar to the situation in housing where new financing mechanisms like adjustable rate mortgages (ARMs) expanded the range of affordability, allowed parents to pay the higher tuitions.

- The incomes of the upper fifth of families grew faster than the median family income, meaning that these families were more able to keep up with the growth in college tuitions than other students.

- Many private colleges made much heavier use of tuition discounting in which wealthier students who could afford the higher tuitions subsidized less well-to-do students in the form of more student financial aid.

It is not clear, however, whether these trends are sustainable through the 1990s. Many private institutions may be reaching the limits of the "high tuition/high aid" strategy which served them so well in the 1980s. Lower interest rates on loans and incentives for saving do not totally offset the impact of higher tuitions, especially in the longer run. The faster growth in the incomes of the upper fifth of the population was spurred in part by the growth in the proportion of couples who are two earners, a trend which is approaching the saturation point. Nor is it apparent how much our society can or will tolerate further inequalities in income growth.

Summary of Key Issues and Recommendations

In the early 1990s, there is much that is unsettling about the financial condition of American higher education. Federal student aid programs seem ineffective at increasing participation rates of target groups of lower-income and minority students. Federal support of campus-based research, long an issue of bipartisan support, sees itself surrounded by mounting controversies. The traditional system of state finance of higher education seems to have broken down, at least to the extent that higher tuitions are replacing state taxpayer support. Institutions are searching for answers about how they can become more productive in an era of limited resources. And students and parents are left to wonder how they will pay for the higher tuitions and other charges.

For all these problems, however, there are also many indications that the system is working pretty well. Participation in American higher education is at its all time high. The continued and growing influx of foreign students attests to the continued belief that American higher education is the best in the world. Research on campuses continue to produce discoveries that fuel economic growth. States remain committed to provide large sums of money for public higher education. Millions of students and their parents are still anxious to attend college despite the higher tuitions and the various criticisms.

In this confusing environment, one should exercise caution in making recommendations for change. Nonetheless, there follows a set of recommendations for how the federal, state, institutional, and family roles in financing higher education might be revised, drawn in large measure from a paper I prepared for the National Commission on Responsibilities for Financing Postsecondary Education.

The Federal Role

The basic elements of the federal role in financing postsecondary education should include: providing a minimum level of assistance to help students from disadvantaged backgrounds attend some form of postsecondary education; ensuring that loan programs exist which allow students and parents to borrow in order to meet the higher tuition costs at institutions in both the public and private sectors; providing assistance to nontraditional students in a form that meets their particular set of needs; assuring a minimum level of quality at institutions eligible to enroll federally aided students; and strengthening the linkage between student aid and community and national service opportunities.

A Basic Level of Assistance. Every student should be eligible for the same amount of federal aid, although the type of aid would vary considerably. Federal student aid generally is not thought of as a totality. For example, very few people could accurately answer the question, "What is the total amount of federal aid that a student can receive?"

because a total never appears in the legislation. Developing such a policy would be helpful in establishing an overall framework for federal student aid.

The federal student aid level should be the lesser of a set dollar amount or a student's cost of attendance. All students would then know they were eligible for a certain amount of federal aid regardless of their financial circumstances. For disadvantaged students, the bulk of the federal aid package would be in the form of grants. Middle-class students would find that more of their aid package was in the form of subsidized loans, while students from wealthier families would only be eligible for nonsubsidized but federally guaranteed loans for themselves or their parents.

The federal financial aid package could also be adjusted by a student's year in school. The proportion of aid in the form of grants might be higher for freshmen and sophomores based on the notion that students should be able to try college without burdening themselves with large amounts of loans. The loan component would then be larger for juniors and seniors or graduate and professional school students who had already established themselves academically.

To assure a uniform degree of access to postsecondary education, the Pell Grant program should be continued and strengthened, with a primary emphasis placed on meeting a minimal level of subsistence costs. In addition, to allow students to choose from a variety of public sector colleges, the Pell Grant award formula should be made sensitive to tuition differences, with the federal government meeting a portion of tuition at a fairly wide range of public institutions. The Congress failed to adopt such an approach in the 1992 reauthorization, with the result that the program will likely become even more oriented in the future than it already is toward community college and vocational students.

Making Pell Grants a federal entitlement program would entrench a number of existing provisions which as a matter of policy should be subject to periodic review and change. What makes more sense is to reintroduce a modest degree of borrowing authority in funding the program that would allow for reasonable estimating errors of plus or minus 5 percent.

Federal Loan Programs. The current federal loan programs should be rationalized and substantially restructured to reduce federal costs, to expand availability, and to make repayment obligations more manageable. To accomplish these goals:

- The existing half dozen or more federal student loan programs should be reduced and consolidated into two programs: one in which students would be subsidized for interest while in school, and the other in which students would be responsible for in-school interest, although it could be deferred and accrued to principal.

• The interest rates on student loans should be tied to annual changes in Treasury bill rates, with a cap to prevent students from paying too high a rate if market interest rate conditions climb excessively.

• The source of capital for student loans should be shifted as much as possible from the current reliance on the private sector to the federal government. Such a change would have the double benefit of not only reducing federal costs substantially but also reducing the costs of borrowing to students and parents by tying the interest rate paid by borrowers to the cost of borrowing of the federal government. This shift to direct lending is especially important for loans in which the federal government does not pay the interest while the borrower is in school, as the accrual of interest will be much slower if interest rates are tied to government borrowing rates and not those of the private sector.

• For loans made by private lenders, the rate of return should be set through an auction, just as the price of Treasury bills is established through an auction, rather than have Congress arbitrarily set the rate through legislation which may have little to do with the underlying profitability of the program. A further step along this line would be for the federal government simply to buy loans from lenders and hold onto them while the borrower is in school, thereby substantially reducing the federal interest costs for the loans.

• Borrowers should be asked to bear a major portion of the costs of defaults by paying an insurance fee of 5 to 7 percent on each loan. This fee should replace the federal origination fee and the insurance premium to state guaranty agencies that borrowers now pay. In effect, the federal guaranteed program would be replaced by a federally insured program.

• The federal government should provide a series of flexible repayment options that would be designed to help those borrowers whose income during the repayment period is insufficient to meet their repayment obligations. Borrowers could apply for assistance in the form of graduated and extended repayment terms, or they could repay their loans as a percentage of their income through arrangements with the Internal Revenue Service. Providing flexible repayment options at the time that a borrower enters repayment is the principal mechanism by which the federal government can redress the accumulated consequences of the loan/grant imbalance. The majority of borrowers who do not have trouble making repayments should be able to continue to repay as they do now on a ten year amortized basis. The 1992 reauthorization legislation made a small first step in this direction.

• The federal government should also reinstated the deductibility of interest on both student and parent loans for college as a further means for making borrowing for college a more manageable proposition.

Helping Non-Traditional Students. When the current financial aid system was developed in the 1960s, it was designed primarily for the traditional college student: the 18- to 22-year old, high school graduate, enrolled full time in a degree granting program, living on campus, and dependent of his or her parents for financial support. But in the several decades since, the nature of the college student body has changed dramatically: students are more likely to be older, part-time, and not dependent on their parents. Most proposals seeking to help these nontraditional students would adjust the existing aid programs to recognize the needs of these students.

In many ways, however, student aid may not be the best way to help nontraditional students. Expanding the eligibility of nontraditional students for aid reduces the amount of aid available to dependent students from low-income families. Moreover, grants based on family income and loans may not fit with the needs of many nontraditional students attending on a sporadic basis. New mechanisms outside of the traditional forms of student aid are needed.

- Employers should be key actors in expanding assistance for nontraditional students because typically these students also work. Employers should be encouraged to provide more assistance to their employees who wish to take a course or two, either through a matching federal grants program or through low-interest loans to employers who provide such assistance.

- The federal Earned Income Tax Credit (EITC) should be modified to cover a portion of the tuition expenses incurred by individuals in families who already qualify for the credit and who enroll in postsecondary education and training.

- There should be a direct federal line of credit for all college students enrolled at least half time that would allow students to borrow at federal interest rates throughout their lifetime. Individuals could use the line of credit repeatedly as long as they maintained a satisfactory repayment history.

Institutional Quality Control. One of the most glaring problems with the current student aid programs has been the lack of adequate quality control on the part of the federal government. The unreasonably high level of default rates in the student loan programs is one indicator of the absence of adequate quality control. This is a consequence of the practice of allowing certain institutions who have abused the rules to continue to participate in the federal student aid programs. The principal federal response to this problem in recent years has been to pass legislation that would prohibit institutions with high default rates from continuing to participate in the federal student aid programs.

There are several problems, however, with this largely regulatory approach of improving program integrity in federal student aid. The default rate cutoffs have been set at relatively high levels to avoid eliminating schools that are legitimate and serve a high proportion of low-income students. As a result, institutions that have a substantial default

rate by any reasonable standard, but are below the threshold level, are not penalized at all. Moreover, the default rate calculation used to determine the cutoff level is problematic in several respects. All this provides a very large incentive for institutions to manipulate their numbers to get below the cutoff level. In addition, the due process entailed in withdrawing federal approval has proved to be so cumbersome that many institutions manage to continue to participate for many years after being targeted as problem schools.

For these and other reasons, an incentive approach would be preferable in which institutions would be fined for defaults above a certain level (much lower than the current cutoff levels). In addition, such a default fee system should be applied to lenders as well who typically have much more control over their student loan default levels than do institutions. In this and many other areas, incentives and penalties that stimulate program participants to do the "right thing" can be a much more effective tool of public policy than regulations because smart people can usually figure out a way to get around the rules.

Linking Student Aid with Service. The many calls which have been made over the years to use student aid as a means to encourage community and national service should be heeded. But this linkage between aid and service should adhere to several principles.

First, service should not be a precondition for the receipt of aid. That would transform service from a voluntary to a required activity, which runs counter to the basic nature and concept of service.

Second, aid programs should reward service before, during, and after college. For example, students who serve in designated ways before going to college might receive more student aid than students who did not serve. Service during college might be rewarded either through college credit or work-study stipends. Service in designated ways after college might lead to forgiveness of a portion or all of a student's loan obligations.

Third, the types of service designated for aid benefits should be carefully considered and have a policy purpose. The types of service that qualify for loan forgiveness should meet national needs, for example, for teachers in underserved areas in order to restrict program costs and to conform with national policies.

Reforming Federal Research Practices. The adverse publicity regarding various facets of the current system of federal support of campus-based research should serve as a stimulus for much-needed reforms. Research facilities should be funded as a direct cost of research grants rather than the current practice of funding facilities as part of indirect cost recovery. This will help increase the level of federal support for facilities and should help to ease the demand for earmarked appropriations. In addition, a system of uniform indirect cost reimbursement should be established to remove the current incentives that encourage institutions to maximize their indirect cost rates.

The State Role

For many years, states have been the largest source of financing for postsecondary education. Most observers of higher education, including myself, believe they should continue to be so. At the same time, the way in which states support higher education is in serious need of reform.

One approach which has generated much discussion is to raise public sector tuitions to meet most or all of the full cost of providing the education and to greatly expand the Pell Grants program as the vehicle to meet much of the need of students who were unable to meet the higher price. But the federal government has enough budgetary difficulties and demands on it already. Instead, the federal government should continue to be responsible for the equity agenda of ensuring that lower-income students have access to postsecondary education within the pricing structure that exists. If in adhering to that equity agenda, the federal government meets a portion of tuition increases, all the better.

I believe that states should continue to bear the primary responsibility for financing and should deal with equity issues internally rather than shift that burden to the federal government. In order for states to fulfill this function, the following four steps for reform should be considered.

Tie Public Sector Tuition Increases to Increases in Student Aid . The most troubling aspect of the recent double digit percentage increases in public sector tuitions is that, in most states, aid has not been increased sufficiently to cushion the blow for needy students. As a result, these recent tuition increases spell real trouble for access to public higher education in this country.

The first critical step in reforming the current system, therefore, is that states and institutions should be prepared to provide sufficient amounts of student aid to provide a safety net for needy students when public sector tuitions rise. This safety net, which should be installed and maintained regardless of why tuitions increase, could be provided either by expanded appropriations for the state agency responsible for student aid or through the institutions themselves in the form of expanding student aid budgets that are funded through the increased tuitions. Increases in institutionally managed aid may be the preferred alternative because state grant programs have been chronically underfunded and tend to be more tilted to meeting the needs of private college students.

Tie Public Tuition Increases to Growth in the State's Economy. One of the most prominently discussed ideas in higher education finance over the past two decades is the recommendation that public sector tuitions be set as a percentage of the costs of educating a student. The percentage most often used is one-third, in keeping with the Carnegie Commission and other reports that first recommended this concept. But one concern with this approach is that tying tuitions to costs provides an incentive for institutions to increase their costs since that will also increase their tuitions. Thus, the natural underlying

inclination of institutional officials to increase their budgets is given greater impetus when tuitions are tied to costs.

This concern leads to the suggestion that once tuitions reach some sort of equilibrium position, future increases in tuition should be tied to the general growth of the economy within the state, either median family income, disposable personal income, or some other economic measure that reflects the growth in the state's economic well being. Such an approach would ensure that the future growth in tuitions did not exceed the ability of the state's residents to pay that tuition. It would also provide a great deal more predictability for institutional administrators in planning their budgets than the current system in which tuitions tend to be set very late in the budget process.

Stabilize Funding for Higher Education through Reserves and Countercyclical Debt. The biggest problem with setting tuitions as a percentage of costs or in line with state economic growth is that it can introduce more variability into a system which is already very unstable. Unlike the current system when tuitions serve as a flywheel that counteracts downturns in state funding, these alternative systems remove the stabilizing force of tuitions. Thus for these new approaches to succeed, there must be greater stability in the overall system of state finance for public institutions.

One way to introduce more stability is to institute a system of reserves when times are good and to use debt when the economy is in recession to minimize the need to use tuitions as the stabilizer. Such a system would require institutions and states not to spend all the money that was available when state revenues were growing, putting aside some into a rainy day fund or building capital accounts to help when economic growth slowed or fell.

Economic slowdowns would also be the time to use bond financing to make up for the shortfall in public funding and to reduce the need to raise tuitions when students and their families can least afford these additional bills. One way to combine these two concepts is to set up reserve accounts in good times that would be used to retire the debt that was raised during the bad economic times, with the result that the overall debt levels would not increase over the course of the economic cycle.

Re-examine the Traditional Reliance on Enrollment-Driven Funding Formulas. Since the 1950s, most states in determining their appropriations for public sector institutions either use a formal funding formula tied to enrollments or use enrollment as a key variable in setting funding levels. While this reliance on enrollment driven formulas has had many positive effects, including reducing the influence of politics on the distribution of taxpayer funds, it has also had some drawbacks. Blind allegiance to enrollment-driven formulas tends to stifle creativity and flexibility in budgeting and minimizes the incentives for cost containment. These formulas also tend to reward growth and penalize downsizing since they are typically tied to average costs per student.

To reward innovation, greater consideration should be given to ideas such as challenge grants where institutions have to submit proposals to justify funding. Some funding should also be provided on the basis of output measures, such as number of graduates or test scores of seniors, rather than input measures of enrollments alone. This would give institutions incentives to concentrate on teaching students and getting them to graduate. Incentives might also be provided to institutions who feel they need to reduce their size in order to provide adequate resources to the students who do attend. While care must be taken to prevent abuse of such systems, it nonetheless seems important to be willing to experiment with ideas that will make higher education more responsive to changing needs.

Before concluding this section on states, there are also a number of avenues for federal/state cooperation that merit further exploration. Having Pell Grants meet a portion of increases in public sector tuitions is one example of how federal policies can influence state policies. Establishing a federal matching program for states that develop early intervention programs is another. Federal and state cooperation in the setting of standards for eligibility in the federal student aid programs is still another. These three ideas represent just a partial list of the ways in which federal and state policies might dovetail rather than compete.

The Role of the Institutions

The way many institutions improved themselves in the 1980s was to expand their revenue base: by securing more state funding in the case of public institutions; by raising their tuitions; by expanding their fundraising efforts; and, in the case of research institutions, by gaining more support for campus-based research from either governmental or private sources. These additional revenues were then used to pay faculty and staff more, renovate facilities, buy new equipment for laboratories and more books for the library. Or the increased revenues were used to acquire resources from some other part of the higher education system, through recruiting efforts to bring in better students, by hiring faculty from other campuses, by increasing indirect cost recovery rates, and by expanding the athletics budget.

To appreciate what happened in the 1980s, it is first necessary to recognize that higher education is a very competitive industry. The people who run colleges and universities want their institutions to be better, to attract the best students and faculty, and to provide the best quality of teaching, research, and service to the community that they possibly can within whatever resource constraints they operate. Historically, the degree of competition in higher education has been a very positive force.

But there are a number of signs to suggest that the competition in higher education may have become unhealthy in the 1980s, that many institutions went too far in their efforts to become better. The sometimes unseemly marketing that more and more colleges turned to during the 1980s to attract a critical mass of students to their campus is one

example of competition perhaps taken to an extreme. The competition among some universities for star faculty is another such example. Paying leading faculty members large sums of money or providing them with labs worth millions of dollars as an enticement to come to a particular campus can be a sign of excessive or abusive competition.

Another example of abuse resulting from excess competition is the reduction in teaching loads that occurred at many of the best institutions in this country over the past decade or so. In order to attract or retain faculty, many of these institutions reduced the teaching loads of their professors to two courses per semester, or in some cases even less. A number of faculty avoid teaching all together by buying out their teaching time with the proceeds from research grants (Massy & Wilger, 1992).

A related excess in competition is the desire of far too many institutions to be research universities. There are a number of reasons why so many institutions seem to adhere to this single model of excellence. One is that future professors are trained as graduate students on campuses that stress research over teaching. When these graduate students receive their degrees and become a professor at some not-so-elite institution, they say to themselves and their colleagues, "Why can't this institution be just like the one where I went to graduate school?" The answer to this question too often leads to faculty pressure for a school to move up in the echelon of institutions.

The ability of institutions to compete in these ways was fed by the growth in resources in the 1980s. Without higher tuitions, more state funding, the growth in federal research support, and large scale fundraising campaigns of the 1980s, there would have been much less abusive competition in the 1980s.

What seems to have gotten lost in the 1980s was that institutions can improve themselves without obtaining additional revenues, by getting more out of the resources that they already have on campus through greater efficiency in administrative operations; more productivity from their faculty, in terms of research, teaching, or service; and greater use of technology to achieve cost savings without sacrificing quality (Odden & Massy, 1992).

Getting more out of the resources already in place might be referred to as the value added approach. Improvement by buying resources from some other part of the higher education system, as many institutions tried to do in the 1980s, might be called the redistribution approach.

Adding value seems to be a much more productive way of doing business than redistribution. Ultimately, higher education can only improve itself as a system by relying more on a value-added approach. Yet much of what many colleges have been about for the past decade, albeit with good intentions, has been to improve themselves by gaining resources from some other part of the higher education system. One of the positive developments arising from the situation in the early 1990s from the likely restrictions in

resources for higher education is that institutions will be forced to try to be better by looking at ways of improving the productivity of the resources that are already have rather than try to improve themselves by seeking resources from some other part of the higher education system.

For both public and private institutions, this means using the budgetary stringency of the early 1990s as a motivation for increasing teaching loads of faculty and encouraging them to become more oriented toward the needs of students. Tight economic times may also force institutions to look more seriously at techniques such as decentralized management or Total Quality Management as a means for streamlining administrative operations and meeting student needs through increased efficiency and service-oriented goals.

For private institutions, doing better with fewer resources may require shifting from a high tuition/high aid strategy to a lower tuition/lower cost strategy. This would entail a decision to keep tuition increases at or below inflation rather than building in the typical one or two percentage points above inflation that has been viewed as the norm for so long. Such a strategy would immediately provide relief in the form of less pressure on the student aid budget since less discounts would be required to meet full need. Over time, it would also help to address the middle-class melt problem in that tuitions will eventually become more in line with what these students and their parents can afford to pay.

In addition, shifting to a lower tuition/lower cost model could have the effect of lowering salary expectations among the faculty and other staff. This is not the easiest policy to accomplish—it is far easier to raise tuitions than to make hard budgetary choices—but it is not clear whether the option of high tuition/high aid is any longer a realistic one for many schools.

The Responsibilities of Parents and Students

There are at least three possible changes in policy that might help families pay the growing costs of attendance at many colleges and at the same time redress the balance in responsibilities between students and their parents.

One way to address this imbalance between parents and students would be to expand the array of incentives at either the federal or state level that would encourage parents to save more for their children's education. This recommendation is based on the premise that the more that parents save, the less burden is likely to be placed on the student. The federal government should assume a more prominent role in promoting savings for college by providing better information on college costs and financial aid, and by helping families in sorting through the benefits and drawbacks of various savings opportunities. In addition, the federal role in savings might reasonably include financial incentives to encourage additional savings.

But a tax credit or deduction for college savings or allowing the use of IRA funds for college should not be adopted despite its obvious political appeal. Most of the evidence on Ira suggest that this form of tax advantaged saving led more to a shifting in how one saves rather than an increase in saving. Allowing parents to use their Ira for college would thus deprive them of the use of assets that they might need for retirement since they would no longer have any call on those assets. However, allowing parents to borrow against their Ira to pay for college, just as can be done now with many life insurance policies, would seem a reasonable compromise in this regard.

The federal tax system should be designed to encourage more savings generally by shifting from a totally income-based tax system to one in which consumption is taxed at a higher rate than savings. This could be done, for example, through the institution of a value added tax that would replace at least a portion of the revenues currently raised through the income tax which contains no incentive for saving.

The needs analysis formula for awarding federal student aid could also be modified to reduce the disincentive to save. While the actual size of the disincentive is much smaller than many perceive (because assets are "taxed" at a relatively modest rate in the needs analysis formula), the disincentive could be reduced fairly easily by excluding assets from the family contribution calculation entirely. Congress did this in the 1992 reauthorization, but failed to adjust the expected contribution from income to keep the change spending neutral, thus increasing the number of middle-class students eligible for federal aid, likely at the expense of denying lower-income students increases in aid

A better policy would be to have an additional contribution expected from income that would represent an imputation of assets. For example, a family with income of $50,000 might be expected to have saved $100,000 in asset equity and the family contribution figure would reflect an expectation from this level of assets. The frugal family who had saved more than $100,000 would be expected to contribute less than under the current system where their actual net worth is factored into the calculation. For those parents who had saved less than $100,000, the expected contribution would lead to parental or student borrowing to make up for the lack of expected assets.

The provision passed in 1988 to exempt from taxation the interest on U.S. Savings Bonds if the proceeds are used for college is the one existing solid federal incentive to save for college. Unfortunately, since this is a tax exemption, the largest benefits go to the families at the upper end of the income eligibility. In addition, to prevent higher-income borrowers from receiving this exemption, income limits have been imposed, which are counterproductive to the objective of simplicity that fueled the passage of the legislation. If this benefit is retained in the future, it should be provided in the form of a tax credit, that would give equal benefits to individuals at all income levels. If this were done, then it would make sense to remove the income ceiling entirely in the name of simplicity.

Another way to redirect the shift in responsibility from parents to students is to make it less attractive for traditional-age college students to declare themselves independent. If a student is older than the traditional college age, then that student should be able to apply as an independent.

But for students below that age, it is important not to make it too attractive to declare independence as a matter of convenience. To deter this from happening, a family contribution should be required of students of traditional college age who do not qualify on some other criteria such as being an orphan, married, or a veteran. The amount of this assumed contribution should be enough to prevent the student from qualifying for grant assistance at most public institutions. Thus, the assumed contribution might be set at $5,000 which is roughly the average cost of attendance at public institutions. These students should be able to borrow to replace this family contribution, but they should not be eligible for grant assistance.

A third policy change that might lead to renewed parental responsibility for paying for college would be to make parent loans a more viable borrowing option than is currently the case. One way to do this would be to alter the terms and conditions on parent loans to make it more worthwhile for parents rather than students to borrow, for example, by lowering the interest rate or by removing the loan limits on PLUS (Parent Loan for Undergraduate Students) loans (which was done in the 1992 legislation). A more substantial, but probably more effective, policy change would be to allow parents to take the in-school interest subsidy that is currently available only to student borrowers. That is, if students qualified for in-school interest payments on the basis of their family income, the parents of that student could qualify for in-school interest payments if they borrowed in the PLUS program. The subsidy could be used only once a year, as is now the case, but effectively parents and their children would be able to choose who could use it.

Ultimately, the question of financing higher education comes down to whether students and their parents can pay for it. In the early 1990s, after a decade of rapid tuition inflation, and some faltering in the student aid system, that question is not an easy one to answer. But it is one that is well worth asking because all other financing issues will flow from it.

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